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AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

AUGUST 1, 1935



OXYDENDRUM ARBOREUM

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Cost Finding in the Nursery
Making Your Publicity Pay
Propagating by Leaf Bud Cuttings

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

F. R. KILNER, Editor

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EDITORIAL communications on subjects connected with nurseries, arboriculture or other phases of commercial horticulture are welcomed by the editor. Also articles on the subjects and papers prepared for conventions of nursery associations.

NURSERY ADVERTISING.

Aside from their catalogues, nurserymen cannot be classed as heavy users of advertising. Indeed, in comparison with other products offered for enjoyment in the home and for the pleasure of the public, hardy ornamental plants are not put very vigorously before the prospective buyers. Possibly the fact that furniture, etc., can be sold the year around is somewhat responsible for this situation, but there is a seasonal aspect even to those items of manufacture. One would suppose that, to counteract this, plants would be pushed the more vigorously in print during the short periods of spring and autumn sales. Such is not the case. In season or out, the amount of space used in newspapers or magazines by nursery firms, with a few exceptions, is quite limited.

If the reason is that advertising has been found expensive for the sales directly produced, part of the responsibility lies with the expertness, or the reverse, with which this important means of making sales is employed. Hence the remarks of James Geehan in this issue are particularly important, because they show ways in which the nurseryman can make his publicity pay. By a more careful study of his media than is often employed, the small advertising appropriation of the average nursery can be made to produce greater returns. When this is done, there is no question that greater use will be made of advertising not only for general publicity, but for the purpose of making immediate and direct sales to the customer.

As the business upturn develops, there will be more competition, and keener competition, between industries for that part of his dollar which can be employed for something besides the necessities of life. Gardening has received a tremendous impetus in the past few years, chiefly from the pure interest of the amateurs themselves. This can be fostered by those who sell plant materials to the public, and it is their interest to do so. Their products give pleasure and satisfaction. It is fair to push them, besides being good business. If the proper procedure is followed in making contact with the public, adver-

The Mirror of the Trade

tising will be just as profitable to nurserymen as it is to other lines of business.

COST FINDING.

Inquiries received from nurserymen by the editor of this magazine as to the proper prices to charge for labor, materials and stock indicate a general lack of knowledge on costs and mark-up in the nursery field. Consequently, it was to be expected that a discussion of the general principles of cost finding before the A. A. N. convention a year ago, by John Surtees, awakened widespread interest in the subject. He has since addressed many gatherings on the subject.

At the Cincinnati convention he went still further into the subject and, by reference to specific examples, pointed out the practical application of cost-finding principles. His talk is printed on another page of this issue and deserves thorough study. The present article deals with the problems of the retail nurseryman and the landscaper. In the next issue will appear a general outline of a cost-finding system for the use of wholesale growers, prepared by Mr. Surtees.

BEAUTIFY WITH RELIEF LABOR.

Amid the criticisms and charges of graft, waste and damage in federal relief projects, there is great satisfaction in learning of the use of government funds in such socially beneficial projects as those at Fort Worth, Tex., illustrated with color slides and described by the city forester, R. C. Morrison, at the recent A. A. N. convention.

Fortunately, the park department in Fort Worth as far back as 1925 had employed consulting landscape architects and had prepared plans for nearly every park area before 1930. So it was a simple matter to submit useful projects when the C. W. A. first began its program in the autumn of 1933. Through the employment of relief and C. W. A. labor, the city of Fort Worth has completed approximately twenty miles of new park drives, built a refectory and a feed house at its zoological park, improved many areas previously unusable, pruned thousands of trees in the parks and on the city streets and completed the Fort Worth botanic garden.

The botanic garden in itself is a magnificent undertaking. Instead of plants being grown simply as specimens, they are used to create landscape effects, some naturalistic and some formal, including wild flower areas, rose gardens, aquatic gardens, a desert area and gardens of irises, annuals and perennials.

Not only has the park department made use of relief labor for park work, but it undertook the development of nine school grounds costing one-half million dollars, thereby producing additional neighborhood playgrounds. In place of rock piles and cinder patches, there are now lawns, shrub plantings and recreation areas. So successful and satisfactory have been the results that the board of education and the Fort Worth park department are not resting on their laurels, but are anticipating the development of all the other school

grounds at a cost of two and one-quarter million dollars.

The significance of all this development, declared Mr. Morrison, is that the people of Fort Worth will have more adequate play and recreational space for the increased leisure that is to be theirs in the future, and that an educational institution will be more than a mere building with four walls. Equally important is the demonstration that constructive work can be done efficiently through government agencies. If all the C. W. A. and work relief organizations had been as well managed as the one in Fort Worth, no doubt public opinion would be more favorable to their continuance to give to communities throughout the country those things which were formerly considered unessential, but which nurserymen know are needed to satisfy that common human interest in and desire for growing things that give pleasure through their beauty.

OXYDENDRUM ARBOREUM.

The sorrel tree, *Oxydendrum arboreum*, also called sourwood, is seldom seen in the plain states because of its dependency upon an acid soil. However, now that gardeners prepare special soils more frequently, this meritorious small tree should come into greater use. Even in acid soil regions, the sorrel tree is not commonly employed in landscape work, which is unfortunate, for it has many excellent features. Its natural range is Pennsylvania to Florida west to Indiana and Louisiana, but, with a little special care, the plant can be adapted to many other sections.

This handsome midsummer-flowering tree—illustrated on the front cover—usually grows only fifteen to twenty feet high, though it sometimes attains a height of seventy-five. The individual urn-shaped, greenish white flowers are small, but as they appear in loose terminal panicles of six or more one-sided racemes they become quite showy. The large, shiny leaves display brilliant shades of red in fall, and the grayish brown fruits are conspicuous and interesting in winter.

Propagation is by seeds sown in a shaded moist bed, using an acid medium the same as for other ericaceous plants. The growth of young seedlings is slow. Other information about the sourwood will be found in L. C. Chadwick's article in this issue, but by way of closing these notes, we quote the following appreciative comments from the catalogue of Andorra Nurseries, Inc.:

"The sorrel tree. Some day this tree (*Oxydendrum arboreum*) will be known to everyone as it is now known to those fortunate ones who have already made its acquaintance. It rivals its fellow native, the dogwood, in interest; it surpasses it in a certain grace of texture. Its early foliage is a lyric note in the jubilant chorus of spring. But it releases its greatest charms as the season advances. At midsummer, while its neighbors are resting or sulking in their tents, it decks itself in festal plumes of white, like sprays of lily of the valley. These it holds and finally shakes them out like golden fringe against its shining autumn cloak of richest red."

AMERICAN NURSERYMAN

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AUGUST 1, 1935

No. 3

Cost Finding in the Nursery

**Applications to Problems of Retail Nurseryman and Landscaper Detailed
in Address of John Surtees, of Outpost Nurseries, at A. A. N. Convention**

A year ago at the convention held in New York city, I had the privilege of introducing the subject of cost finding in the nursery industry. At that time no attempt was made to go into any detail, only an outline of general principles being given.

This year it is my intention to go into more detail, to show how these principles can be applied. For this purpose I have prepared a set of illustrations (printed on the next page), to which we will refer as we go along. In this way, the points I wish to emphasize can be more clearly understood.

The nursery industry is gradually becoming more and more alive to the fact that costs are a serious problem, and that these costs have a decided effect in the business of making a profit. And so it is becoming more and more necessary that every nurseryman should study his costs, so that he may not only be a practical nurseryman, but a successful business man as well.

Outstanding Objections.

The outstanding objections to adopting a system of costs are as follows:

1. The expense of installation.
2. A strong aversion to detail.
3. A reluctance to spend time on this detail.

4. An erroneous idea that money is not made through clerical work.

These objections have prevented at least ninety-five per cent of the nurserymen in the country from trying to find out what their costs are. Yet, under a standardized system, the expense of installation is practically negligible; the detail is reduced to a minimum; the time spent is actually profitable, and a great deal of money can be saved by clerical work, if directed in the right channels.

So there does not appear to be the slightest doubt that the system I advocate, devoted to the problems of the nurseryman and his costs, which I have found from careful study and long experience to be practical and efficient, will fill a much-needed want.

Naturally in the short space of time at my disposal I cannot cover all the points I should like to, but the few details I can give will show how simple the system is to operate.

The work is divided into three sections. The first deals with the problems of the retail nurseryman. The second

deals with the problems of landscaping, while the third deals with the problems of the wholesaler. Later I may add a section dealing with the problems of the propagating department.

As the number of retail nurserymen far exceeds the number of wholesalers, we shall take their problem first. Every item of plant material, labor and overhead is placed on a basis of sound averages. In other words, all these items are standardized, and the system gives full details of the advantages of standardization and the law of averages. This standardization is necessary, for if each nurseryman were to attempt to figure out the cost of each individual variety and size of plant that he grows, he would be attempting the impossible, and the expense would be too heavy for their intrinsic value. But by adopting a standard method, the cost of operating becomes almost negligible.

Examples.

To show how plant material can be standardized, I refer you to example 1 in the series on the following page. Here we have a group of four varieties of abies. These four varieties have all, more or less, the same habits of growth. The lining-out stock, which is the point from which these studies are carried out, all bears the same basic cost. That is, the purchase price of each of these varieties in a size 6 to 9 inches can be averaged up, so that when costs are figured, they start from this basic purchase price.

Having got the group lined up, the next step is to itemize the habits of growth. Example 2 on the sheet gives the average rate of growth on these four varieties of abies, year by year.

The next step is to itemize the amount of labor that is required to bring the plants to the salable sizes. The only way in which the cost of a tree can be arrived at is to build up, step by step, all these items of labor. In example 3 the details of labor involved in this group of abies, year by year, are explained. The details of labor given in this example compose the method under which we in Outpost Nurseries grow these plants under average conditions. If other nurserymen have other methods of growing them, then all that needs to be done is to itemize the labor according to those methods.

Thus on one sheet we have the whole history of this group of abies, starting from the lining-out stage, showing the yearly average rate of growth and the average labor involved throughout all the years of growth. We in Outpost Nurseries have compiled a set of 100 groups of plants, all tabulated in this same manner, comprising evergreens, deciduous trees, flowering shrubs, etc. The average nurseryman could probably place all the plants he grows in from fifty to seventy-five groups, and to the practical man it would be a simple matter to tabulate them.

Labor Charts.

As to the value of the labor involved, this can also be standardized, or averaged, by using a set of labor charts. We have also compiled a set of thirty-eight charts, covering every operation on every type and size of plant grown. These charts are based first on time, for time is the fundamental basis of all costs. These times are universal, not only in all parts of the country, but also throughout every year. For instance, it will take just as long to dig a hole by hand twenty years from now as it does today, no matter whether that hole is dug in Connecticut or California, normal average conditions, of course, prevailing.

The second basis of these charts is the number of plants of certain sizes that can be handled in a certain time by a certain crew of men. Example 4 gives an illustration of how these charts are compiled. First we have the basis of time on a crew of five men, one foreman and one driver. Then follows the number of plants of various sizes this crew can handle in the time specified, and the unit rates carried out.

As you will notice, these charts are based on the following rates: Day men, 35 cents per hour; foreman, 75 cents; driver, 50 cents.

Suppose that other nurserymen in other parts of the country have their wage scale as follows (see example 6): Day men, 25 cents per hour; foreman, 60 cents; driver, 40 cents.

On the time basis this would figure out at twenty-five per cent less than the example 4. Then all that needs to be done is to use the unit figures in example 4, and deduct twenty-five per cent from the total. In this way the charts can be applied to any nursery in

the country, no matter where it is located or what scale of wages is paid. The times will never change, regardless of varying wage scales. I may say that we have used these charts in Outpost Nurseries since 1931, and the costs have not varied in any one year more than five per cent.

Overhead.

We have now reached the stage where we can arrive at the prime cost of production. The next stage to consider is how to distribute the overhead. And this is where most nurserymen fall down. Wages alone cannot be taken as a basis for costs. As an example of this, take the operation of plowing a field by a team of horses, against a tractor. We shall assume that the wages paid to the driver of the team and the tractor are the same. Now the tractor will do the work in one-third of the time, but the expenses against the tractor are considerably higher than the expenses against the team.

Also take deliveries. Twenty-five or thirty years ago, deliveries were made by horse and wagon. Now all deliveries are made by motor trucks. Assuming again that the wages of the drivers were the same, you have a much heavier expense against the motor trucks than you have against the horse and wagon.

And so it is in the case of new machinery. Where five men were employed to do a certain piece of work, a machine will do the same work with only one man. This reduces the pay roll itself by eighty per cent, but it would be foolish to say that the costs have been reduced eighty per cent, and quote prices accordingly. The introduction of the machine brings with it an additional burden of expense, which must be considered if you desire to make a profit. Thus overhead becomes of paramount importance.

During the period of growth, overhead charges keep piling up. It is impossible to charge all the overhead of one year against the plants that have been sold during that year. This would be placing too big a burden against those plants. The only practical way is to distribute the overhead according to the amount of labor involved. For instance, if the labor in any one year amounts to \$10,000, and the overhead expenses also amount to \$10,000, then the rate of overhead against the labor would be 100 per cent. In the system, all the items which constitute direct labor and overhead are clearly given; so by keeping these items separate in the general ledger, it is a simple matter to find out what the actual percentage is.

Assembling Costs.

We have now covered all the items that constitute cost of production—materials, labor and overhead. To show how these costs are assembled, I give an illustration in example 5. Here we have the average cost of the first year carried out; every item of material and labor is taken into consideration, and the overhead charges are added in proportion to the amount of labor. Interest charges of six per cent are also added, which is a perfectly legitimate charge. Now, we all know that if we plant 1,000 plants, there will not be 1,000 left at the end of the year. So in this first year we take the average losses at ten per cent.

These calculations can be carried out for as many years as are necessary,

Nursery Costs Illustrations.

1.
EXAMPLES OF GROUP
Abies balsamea
" concolor
" Nordmanniana
" Fraseri

HABIT OF GROWTH

From transplants, 6 to 8 inches
Growth first year, 2 to 4 inches
" second year, 3 to 6 inches
" next 3 years, 6 inches per year
" next 4 years, 6 to 12 inches per year
" afterwards, 12 inches per year

LABOR
Line out in nursery 1 x 1 foot
Transplant after 3 years 3 x 3 feet
Transplant after next 3 years 5 x 5 feet
Weeding first 3 years
Cultivate 3 times per year after third year
Water as required
Mulch after planting and transplanting
Trim every year after third year
Dormant and summer spray after fourth year

LABOR CHART

Digging evergreens by hand
Basis of Cost
5 men 1 hour each = 5 hours @ 35c = \$1.75
1 foreman 1 hour @ 75c = .75
1 driver 1 hour @ 50c = .50
Total \$3.00

Size (feet)	No. per hr.	Rate	Unit cost
Up to 1	40	\$3.00	\$0.075
1 to 2	30		.15
2 to 3	20		.20
3 to 4	15		.30
4 to 5	10		.50
5 to 6	6		.75
6 to 7	4		1.00
7 to 8	3		1.50
8 to 9	2		2.00
9 to 10	3 in 2 hrs.	6.00	2.50
10 to 11	3 in 2½ hrs.	7.50	3.00
11 to 12	4 in 4 hrs.	12.00	

5. COST OF GROUP—ABIES

First year, 1000 transplants, 6 to 8 ins.
@ 3½c \$35.00
Labor
Planting 2c \$50.00
Weeding 5 times 55c 2.75
Mulching 1c 10.00
Watering 6 times 1.00 6.00
Sundry labor 1.00
\$39.75
Overhead, 100% 39.75 79.50
Manure for mulch \$114.50
Interest, 6% 2.50
\$117.00
7.02
\$124.02

Losses, 10% = 100 = 900 left 14c each

6. DIFFERENT WAGE SCALES

5 men 1 hour each = 5 hours @ 25c = \$1.25
1 foreman 1 hour @ 60c = .60
1 driver 1 hour @ 40c = .40
\$2.25
= 25% lower than No. 4

7. PLANTING ESTIMATE

6 Ulmus americana 3 to 3½ ft.	\$9.00	\$54.00
6 Ginkgo biloba "	20.00	120.00
6 Acer platanoides "	11.50	69.00
6 " dasyacarpum "	7.00	42.00
6 " saccharum "	12.50	75.00
6 Sorbus Aucuparia "	7.00	42.00
6 Populus Boleana "	5.00	30.00

Total selling value \$432.00
25% = 108.00

8. PLANTING ESTIMATE

42 Ginkgo biloba 3 to 3½ ft. @ \$20.00 \$840.00
25% = \$210.00

9. PLANTING ESTIMATE

42 Populus Boleana 3 to 3½ ft. @ \$5.00 \$210.00
25% = \$52.50

care being taken to follow the layout of growth and labor as tabulated.

Some months ago an article appeared in one of the trade magazines in which the writer stated that the retail nurseryman should charge at least five times the purchase price in order to get back all his labor and expenses. This example bears out his statement. Here

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we have shown that the stock was purchased for 3½ cents, and the cost at the end of the first year amounts to 14 cents, or four times the price paid. Add digging and loading costs to this figure, and five times the purchase price is not any too much. As the years go on, this percentage is much increased.

Thus we have a complete record showing the cost year by year, together with the sizes reached during those years.

It may be said that, to compile all these data, an enormous amount of detail is required. This is more or less true, but for the first year only. Because once the job is done, it stands for all time, the cost only varying with a change of wage scales, which can be adjusted by using percentages.

Landscaping.

You have all noticed the tremendous variations in bids on various public projects. In many cases these bids vary as far as 300 per cent, and it is a matter of common knowledge that only about five per cent of the successful bidders on this type of job ever make money. In fact, it is this department that is responsible for more losses than any other, and steps should be taken to correct this evil.

In studying the bids for various types of landscaping, I find that most nurserymen simply work on a percentage system. That is, they take the selling price of the trees that compose the order, and add a percentage to cover labor, overhead and profit. Twenty-five per cent is the most common percentage adopted. I propose to show you why this method is entirely wrong. First, planting on a client's estate is an entirely different proposition from planting in the nursery. In the first case, no two projects are alike. Planting is done to give a certain effect, and a wide variety of trees and plants is used to bring about that effect. Different conditions of soil, etc., exist in each place. Therefore, it is impossible to use a percentage system and expect to come out on the right side in the long run. I know from practical experience that this method works much to the disadvantage of the nurseryman. The only correct way to figure a landscape project is to build up the estimate step by step, taking each size and type of tree into consideration, ground conditions, distance from nursery, etc.

Percentage Plan in Error.

In the system all these varying conditions are clearly outlined, and in the examples of estimates these conditions are taken care of. As an illustration, I refer you to example 7. Here we have an estimate for forty-two trees, all exactly the same size, but all of different values. You will see that the total selling value of these forty-two trees amounts to \$432. Twenty-five per cent of this amount would equal \$108 for the planting charges. In example 8, we have an estimate for the same number and size of trees, but only one type of high selling value, \$840. Twenty-five per cent for planting charges would in this case amount to \$210. In example 9 an estimate for trees of a low selling value is given; forty-two trees of this type would have a selling value of only \$210, and planting charges at twenty-five per cent would equal \$52.50. Thus, in these three examples, we have the

same number of trees, all the same size, yet a difference in the planting charges between the highest and lowest of 300 per cent. Surely you will agree that such a variation is absurd, and it is probably one of the reasons why there is so much variation in bids. Regardless of the values of the trees, all of them being the same size, the planting charges in each of these three examples should be the same. It takes just as long to plant a 3-inch poplar at \$5 as it does to plant a 3-inch maple at \$11.50 under average conditions.

Working from the labor charts (and charts for landscaping are included in the work), the value of the planting charges on these forty-two trees would amount to \$90. This would include delivery within twenty-five miles of the nursery, planting the trees under normal conditions, guying and overhead charges of 100 per cent on the labor.

The system I advocate also shows how these variations apply to evergreens and shrubs and, finally, an estimate on a general order covering all these varieties.

Under the percentage method, the nurseryman would probably lose the order in examples 7 and 8, on account of the high planting charges, while if he got the order for example 9, he would lose money.

On the other hand, by using the charts, he would get his full value for his labor, and his chances of increasing his business are considerably enhanced. At the same time he would gain a reputation for fair dealing, one of the biggest assets in any business.

As regards overhead, it must be borne in mind that the labor charts are based entirely on costs. To these costs must be added the overhead charges, which is the same ratio as in the nursery. Some nurserymen have the idea that work done away from the nursery should bear a smaller ratio of overhead. If that were true, then the overhead in the nursery would be increased, thereby placing a burden on the client who does his own planting. Supposing that the total overhead for the nursery and landscaping was 100 per cent. If fifty per cent only for overhead is charged against landscaping, then the other fifty per cent would have to be added to the cost of the trees, thereby making the price more or less prohibitive.

It is true that estimating in this manner involves a little more detail, but this detail is essential, when it is realized that by far the largest percentage of the price of a tree, and landscaping, goes into labor. And, therefore, the detail is much worth while, both from a selling and profit-making point of view.

Advantages.

Now what advantage do you derive from a knowledge of costs?

1. The morale of the help is very much enhanced.
2. Greater efficiency is attained because it shows up the good, conscientious worker against the incompetent one.
3. It actually decreases your pay roll, as it insists upon checking the time spent on various items of work.
4. It actually decreases the overhead, as it insists upon careful consideration of all expenses.
5. By reducing the pay roll and reducing the expenses, the capital is conserved.
6. Your bankers will have greater confidence in your business, and they will extend favors, instead of you having to ask for them.

7. You will gain a reputation for fair dealing among your clients and hold their good will.

8. Your credit with the wholesale and supply houses will be practically unlimited, as credit is extended as much on a firm's character as on its financial resources.

These advantages, together with a feeling of self-respect which you will surely attain, so much outweigh the objections mentioned in the beginning of this talk that they appear insignificant.

I have endeavored in this short space of time to show you that costs are a vital question and that they are not so difficult to find under a standard method. The most successful business man is he who knows his costs and sticks to them in all his transactions.

Naturally, I have only touched the "high spots" in this talk. There are many other factors I would like to explain, but the system goes thoroughly into practically every problem of the nurseryman and has proved itself of inestimable value.

In closing, I wish to say that the extraordinary interest shown in this system, not only among nurserymen in all parts of the country, but also among many universities, agricultural colleges, state departments, etc., has been gratifying and I hope that the time is not far distant when the great majority of nurserymen will realize the value of costs.

CREDIT TO CINCINNATI.

Since the close of the convention of the American Association of Nurserymen, the members of the local arrangements committee at Cincinnati have received a number of complimentary letters expressing appreciation to the local committee for the hospitable time at the gathering.

Among them, and conveying the sentiments of a number of others, came the following from Donald Wyman, vice-president of Bay State Nurseries, Inc., North Abington, Mass.:

Since my return I have had an opportunity to think over the Cincinnati convention and I think that the local committee and those associated with it deserve a tremendous amount of credit for the wonderful program arranged and all the details that were so carefully carried out for our entertainment and convenience.

You have probably been told this many times, but I think that all who went to such pains in arranging the program should, at least, receive our thanks.

In its turn, the local committee wishes to thank all those who helped to make the convention a success. The committee expresses great indebtedness to the Ohio Nurserymen's Association for its financial support. Herman Brummé's prediction of breaking even has come to pass, and all bills have been paid. The recollection of an enjoyable time is, therefore, reinforced by the satisfaction of a financial balance as well.

ELM DISEASE CONFINED.

So far the Dutch elm disease has not been found in Connecticut beyond the zones of infection established chiefly in Fairfield county and around Old Lyme last winter. About 1,000 of more than 200,000 elms inspected by state scouts in the last thirty days were suspects, reports W. O. Filley, forester of the agricultural experiment station at New Haven, but none of the specimens examined in the laboratory contained the deadly fungus. On the other hand, twenty-six new cases have been found by federal scouts in the Greenwich and Old Lyme sections.

PRESIDENT TENNESSEE ASSOCIATION



RICHARD H. JONES.

Heading the Tennessee Nurserymen's Association for 1935 is Richard H. Jones, manager of the Nashville branch of the Howell Nurseries, Knoxville, Tenn. Mr. Jones served the organization as vice-president last year and has indicated a keen interest in the retail aspects of the nursery trade, with many forward-looking ideas.

Born in 1900 and spending part of his youth on a farm near Nashville, Mr. Jones attended the elementary and high schools in Nashville. During 1917 and 1918 he served in the United States Marine Corps, assigned to the Sixth regiment, Second division, being a member of the army of occupation.

After his return home, Mr. Jones entered the University of Tennessee, in 1919, where he specialized in horticulture and botany. In 1923 he received a degree of B. S. in agriculture. He was a member of Phi Kappa Phi honorary fraternity and Alpha Tau Omega social fraternity. Married in 1926, he has one daughter, 7.

After two and one-half years teaching science in a Knoxville high school, Mr. Jones became connected with the Howell Nurseries, establishing the Nashville branch of the firm in 1925. Since then he has actively promoted retail sales and a landscape gardening service.

THE Liberty Heights Nurseries, Baltimore, Md., are now owned and operated by John B. Gaither, who recently leased the greenhouses at Lawndale and Windhurst avenues, Roland Park, Baltimore.

D. L. SMITH, who has been in the nursery business at Devonshire boulevard and Chatsworth drive, Van Nuys, Cal., with a brother, has bought an acre on Sepulveda boulevard, Van Nuys, where he will establish display facilities and a salesroom, continuing to grow stock at the old location.

Coming Meetings

Announcements of Approaching Events

OKLAHOMA MEETING.

The Oklahoma State Nurserymen's Association will meet in its semiannual convention at Noble, Wednesday, August 7, at 10 o'clock.

An interesting program is being prepared by the program committee. Entertainment for the day will include a barbecue in the park at noon and dinner served by the ladies of the Methodist church in the evening. Special entertainment of moving pictures and music is being provided for the dinner hour.

W. E. Rey, Oklahoma City, is president, and Mrs. Jim Parker, Tecumseh, is secretary-treasurer.

WISCONSIN SUMMER MEETING.

The Wisconsin Nurserymen's Association will hold its annual midsummer meeting and picnic at Grant park, South Milwaukee, Wednesday, August 7. All nurserymen are invited. This is to be a basket picnic and everyone attending is expected to bring his or her basket lunch.

A full and detailed report of the meeting of the American Association of Nurserymen will be given at this meeting, and there will be a discussion of other vital matters pertaining to the welfare of the nursery industry.

PENNSYLVANIA JOINT MEETING.

A joint meeting of the Pennsylvania Nurserymen's Association and the Western Pennsylvania Nurserymen's Association is set for August 14 at Pittsburgh. The Western Pennsylvania association is acting as host and making all arrangements through a committee consisting of Rhea F. Elliott, Elmer Freeland, Orlando Pride, Louis Wissenbach and John Eisler. The Lake County Nurserymen's Association has received an invitation.

Registration will take place at the Keystone hotel at 9 a.m. Nurserymen may visit there or take trips to local points of interest. At 12:30 p.m. everyone will assemble at John Eisler's farm, near Evans City, where will be held a corn and wiener roast, to be followed by games and contests in the afternoon. Guests are invited to bring bathing suits and towels, as plans have been made for a tug of war across the creek between western and eastern groups.

Upon return to the hotel, a dinner will be given at 6:30 to all the guests by the Western Pennsylvania association. About 8:15 p.m. there will be a business meeting of the three associations, President L. U. Strassburger, of the Pennsylvania association, acting as chairman.

MINNESOTA FRUIT GROWERS.

The annual summer meeting of the Minnesota State Horticultural Society will be held at the fruit-breeding farm at Excelsior, Minn., of the University of Minnesota August 19. In connection, the Minnesota Fruit Growers' Association will hold a fruit show, at which the prizes will be new fruits, trees and plants given by nurserymen and others.

For many years, a number of Minnesota nurserymen have made this summer meeting the occasion of an inspection of the new fruits at the station; many of such fruits have been later distributed in the ordinary manner by nurserymen.

A trophy cup will be offered by the Fruit Growers' Association, while one plant of a choice, dark red, everblooming carnation will be awarded the wife of the winner of the cup, by Mrs. F. M. Schwab.

TREE CONFERENCE PROGRAM.

The program for the eleventh National Shade Tree Conference, to be held at the Hotel Broadwood, Philadelphia, August 28 to 30, has been completed and is as follows:

WEDNESDAY MORNING, AUGUST 28.

8:00—Registration, fifth floor lobby, Hotel Broadwood.

9:30—Address of welcome, by A. L. Devine, of the chamber of commerce, Philadelphia, and response, by the president, Dr. R. P. Marshall, of the division of forest pathology, Yale University, New Haven, Conn.

9:50—Address, "Municipal Street Trees," by Carl Bannwart, shade tree commissioner, Newark, N. J.

10:20—Address, "Preservation of Shade Trees from Wooded Areas," by R. M. Weakley, of the Howard Tree Expert Co., Warren, Pa.

10:50—Address, "The Use of Instruments in Tree Diagnosis," by A. P. Beilmann, arboriculturist of the Missouri Botanical Garden, St. Louis, Mo.

11:20—Address, "Tree Physiology," by C. G. Deuber, of Yale University.

12:15—Lunch and business meeting, at the Hotel Broadwood. There will be the appointment of committees and the reports of standing committees.

WEDNESDAY AFTERNOON.

2:00—Address, "Historical Background of Cavity Work," by F. A. Bartlett, of the Bartlett Tree Expert Co., Stamford, Conn.

2:20—Address, "Scientific Aspects of Tree Cavities," by Dr. R. P. Marshall.

2:40—Address, "Practical Aspects of Tree Cavities," by Hermann Merkel, of the Westchester county parks, White Plains, N. Y.

3:00—Address, "A Modern View of Twenty-five Years of Cavity Treatment," by Homer L. Jacobs, Kent, O.

3:20—Address, "Importance and Place of Cavity Work in Arboriculture," by Norman Armstrong, White Plains, N. Y.

3:40—Discussion.

WEDNESDAY EVENING.

8:15—Joint meeting with the Philadelphia branch of the National Association of Gardeners, with an address, "Lawn Maintenance," by Dr. H. B. Sprague, of the agricultural experiment station, New Brunswick, N. J.

THURSDAY MORNING, AUGUST 29.

(Papers to be presented in abstract form.)

9:00—"Nectria Cankers of Trees," by D. S. Welch, of the department of plant pathology, Cornell University, Ithaca, N. Y.

9:15—"A New Disease of Oriental Plane," by L. W. R. Jackson, of the Allegheny forest experiment station, Philadelphia.

9:30—"Control of Cedar-apple Rust," by Ivan H. Crowell, consulting plant pathologist, Boston, Mass.

9:45—"Biological Decomposition of Organic Matter," by M. M. McCool, of the Boyce Thompson Institute, Yonkers, N. Y.

10:00—"Nonpoisonous Substitutes for Arsenicals," by Dr. C. C. Hamilton, of the agricultural experiment station, New Brunswick, N. J.

10:30—"European Pine-shoot Moth," by Dr. R. B. Friend, of the agricultural experiment station, New Haven, Conn.

12:00—Lunch and second business session, Hotel Broadwood.

THURSDAY AFTERNOON.

2:00—Demonstration of equipment, including a demonstration of dusting by airplane.

THURSDAY EVENING.

8:00—Joint meeting with the Pennsylvania Horticultural Society, Hotel Broadwood, with an address, "Roadside Beautification," by L. H. Simonsen, landscape architect, bureau of roads, United States Department of Agriculture, Washington, D. C.

FRIDAY MORNING, AUGUST 30.

9:00—Address, "Status of the Dutch Elm Disease Eradication Program," by L. H. Worthley, of the bureau of plant quarantine and control, White Plains, N. Y.

9:30—Reports on "Research Relative to the

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Dutch Elm Disease," from the pathological standpoint, by Curtis May, of the office of forest pathology, U. S. D. A., Washington, and from the entomological standpoint, by C. W. Collins, of the bureau of entomology, U. S. D. A., Washington.

10:30—Reports on "Local Situation Relative to Dutch Elm Disease," for New Jersey, by E. G. Rex, of the New Jersey state department of agriculture, Trenton; for New York, by W. H. Rankin, New York bureau of markets, White Plains, and for Connecticut, by W. O. Filley, of the agricultural experiment station, New Haven, Conn.

11:15—Discussion.
12:15—Lunch and business meeting, Hotel Broadwood.

FRIDAY AFTERNOON.

2:00—Trip to Morris Arboretum.

FRIDAY EVENING.

7:00—Annual banquet, Hotel Broadwood, during which there will be greetings from the Western Shade Tree Conference, by E. H. Scanlan, executive secretary.

SATURDAY MORNING, AUGUST 31.

9:00—Trips can be arranged to Bartram's Garden and other points of horticultural interest for those who desire. Sam N. Baxter in charge.

If at least 100 persons travel to the meetings by train, fare of one and one-third on the receipt certificate plan can be arranged for members and dependent members of their families. This arrangement will apply from the following territories: New England and southeastern and central areas, covering all of the United States east of and including Chicago and St. Louis.

The officers of the National Shade Tree Conference are Dr. R. P. Marshall, New Haven, Conn., president; Dr. C. C. Hamilton, New Brunswick, N. J., vice-president, and Dr. Richard P. White, New Brunswick, secretary-treasurer. Chairman of the local committee in charge of the meetings is Julius G. Heinicke, Germantown, Philadelphia.

BAY STATE TO AID TRADE.

To its experimental work in other fields of commercial horticulture, the Massachusetts State College field station, at Waltham, added a service for nurserymen August 1, announces the director, Ray Koon.

In charge of the new department will be Richard T. Muller, now of Amherst, who has been appointed assistant research professor of nursery culture. After graduating from Cornell University in 1916, majoring in landscape gardening and floriculture, Professor Muller received his master's degree from the University of Maine in 1920, specializing in plant breeding and plant pathology. He was for four years associate professor of horticulture at the University of Maine, one year in charge of horticulture at Hampton Institute, in Virginia, and then for six years assistant professor of floriculture at Massachusetts State College. Later he was for eight years in the commercial field, as hybridist and assistant manager of the rose-growing firm of Montgomery Co., Hadley, Mass.

An appropriation of approximately \$8,000 annually has been obtained for research work in nursery culture. A propagating house of the latest design will be built, and problems affecting nursery culture will be studied. The information gained will be disseminated from time to time.

P. V. CARDON, director of Utah state agricultural experiment station since 1928, is returning to the bureau of plant industry of the United States Department of Agriculture, to take charge of the division of forage crops and diseases. Until he reaches retirement age next year, Dr. A. J. Pieters, who has been in charge, will devote his time to research on forage crops.

Making Your Publicity Pay

Means of Making Nurserymen's Advertising More Effective
Told by James Geehan in Address before A. A. N. Convention

During the past five years many honored businesses failed, values collapsed and fear influenced the management of our industry. We were indeed no different from other industries in this respect, in that all were affected in a similar way. In this time there were many compensating influences taking place that I believe are a distinct interest to all of us.

I believe that no other industry can look forward with any better hopes for the future than we can. Why? Because during these years of depression there has been created for you a great potential market of interested people who are today influencing community thought in the appreciation of nature beautiful and acting as your missionaries in influencing public opinion for the creation of such beauty.

Stand with me in the state of Massachusetts on the threshold of the year 1930 and see the commencement of general interest in horticulture. At that time there were thirty-nine garden clubs, with a membership of 3,000, located in this state. Today there are 150 of these clubs, comprising a membership of approximately 10,000 members in federated and nonfederated garden clubs. They are located in practically every community in our commonwealth.

In the Massachusetts Horticultural Society there has been a tremendously increasing growth of amateurs' interest in horticulture. Twelve years ago we had a membership of 800; today our membership exceeds 8,300 members. In practically all states in the Union there has been an increasing growth in the formation of horticultural societies and garden clubs. The movement has swept the country. Remember, the greatest percentage of this increased growth has all taken place during the depression years.

Without question every effort should be extended by those interested in the future of horticulture to make these organizations successful, because they are today providing a market and will provide a market in the future for horticultural material.

We today throughout the country see tremendous crowds of people visiting arboreta and specialty gardens and also throngs attending the opening of private estates to the public at various seasons of the year. The attendance at the various big spring flower shows in the great cities of the country is also another indication of the increasing interest the public has in horticulture.

Newspapers.

Hardly a week passes but newspapers in various large cities open up garden pages because they are alert to this increasing interest. How should we all cooperate to maintain the interest of this great public, which is your market for the future? We are not in competition with one another, but with other industries that have beauty, quieter forms of sport, travel and pleasure to sell. It is these industries which are after that share of the consumer's dollar that he can afford to spend after he has budgeted his income to take care of his necessary standard of living. So are we.

The Massachusetts Horticultural Society was founded over a century ago and operates under a state charter on a nonprofit basis for the dissemination of information and promotion of horticulture in the state of Massachusetts. As the largest horticultural society in this country, it carries on various departments and fields of work for meeting the needs of the citizens of the state and members of the society—through a library, seasonal flower shows, publication of bulletins of interest, lectures and a semimonthly magazine, also the organ of the Horticultural Society of New York and the Pennsylvania Horticultural Society.

"Naturally, carrying on these activities, we meet with thousands of people yearly," says James Geehan. "In my message I shall try to interpret to you from my contacts with these people what you can do to make your publicity and sales efforts successful in meeting the needs of these people. As you succeed in your efforts in the field so does horticulture advance."

What seems to be the greatest need of these people at the present time? The field of horticulture requires a specialized knowledge, and it is this knowledge that the public is insatiably wanting to make their efforts successful at home.

I suggest that it would be a good idea for your association to organize a press service bureau for the dissemination of timely, seasonal, informative articles, distributed in a form that the newspapers can use and which will be of interest to their readers. Many of the newspapers of the country will use such material, as they cannot afford to carry a trained personnel to make such information accessible to readers. At a small comparative cost for the results obtained, your industry will hold and maintain the interest of this new public in nursery material.

I suggest that you read the recent annual report of the National Garden Bureau, presented by J. H. Burdett at the convention of the American Trade Seed Association, at Columbus, O., June 24. After reading this report, I think you will agree that the publicity received by this association in the newspapers of the country is a splendid evidence of the returns to its group from cooperation.

Reports received from many of the members of the industry indicate that this spring's business has been the best of any for the past five years. As we are emerging from what was an acute and critical situation, we may do well to look over the field of the great population of this country in order to know what media of sales and publicity effort we should decide upon for the success of our business.

Strange as it may seem, many who are successful in the propagation and culture of material are in a fog as to where they may distribute their products at a profit. Let us look over the people in your community and analyze them as prospects for your material.

Prospects.

Surely, you will agree with me, those nurserymen who are adjacent to the large cities of the country cannot regard apartment-house dwellers, renters of homes and the millions of people today who live on substandard incomes or government subsidies as likely sales prospects. Few of the youth of your community are interested buyers. They wish to step at a more lively pace along this road of life and are more interested in sports and entertainment for their enjoyment than they are in horticulture.

From my observations, the love and appreciation of horticulture usually come at a more advanced period in life. Usually the women about the age of 30 and the men of 40, married, owning their own homes, tiring of many of their former pleasures and hobbies and wishing to slow down, turn to horticulture.

I think you will quite agree that the most valuable sales prospect is a person of the age indicated who has land, money and horticultural interest. An analysis of the people of your community on this basis makes it possible for you to eliminate waste in the circulation of your catalogues, sales material, salesmen's effort and advertising expense.

Mailing Lists.

When you determine where your market is located, your next step is the preparation of your mailing lists. There are many methods for securing the names of likely prospects. Time does not permit me to do any more than suggest that you keep in mind the limitations in your field in securing these names so that you do know they will be valuable to you.

With millions of people leading changed lives during the past five years, if you have not done any work in securing new names for your list, quite probably you will find a large percentage of old names obsolete today. It is generally agreed that twenty-two per cent of an average mailing list becomes obsolete during the course of one year. One executive of a mail-order house maintains that this percentage is far too low, inasmuch as his experience indicates that thirty-seven per cent of his lists become obsolete during that time.

Your costs of selling are greatly increased by the use of obsolete lists, and you should make every effort to confine yourself to the names of live prospects, which can be secured by the usual methods of publicity, your salesmen's reports and an investigation of the tax assessors' office of the names and owners of the homes to which you wish to sell.

Catalogues.

Your next step is usually the preparation of your catalogue. In the library of the Massachusetts Horticultural Soci-

ety, which is one of the most complete libraries of its kind in the world, we receive nursery and seed catalogues from all over the globe. It is indeed startling to look over many of them and to note that they lack originality and are indifferent. Make your catalogues more than a perpetual inventory of your nursery; make them interesting for the public to read. If you send out a catalogue, keep in mind it is the representative of your nursery and should reflect your personality.

A good catalogue should be convenient to handle, well indexed and well illustrated if possible. Those who promote the sale of bulbous and rose stock to a large circulation will find it valuable to use color in their illustrations. To those who issue a deciduous tree and herbaceous perennial catalogue, cuts should be used to give a mental picture. You will find it valuable in describing material in many cases to dramatize this material, if possible, in order to secure the readers' interest. For example, one who issues an herb catalogue can secure interest without the use of cuts by dramatizing the stories of this material in its use by the ancients. As beauty is truth and truth beauty, be careful in your descriptions not to exaggerate what the public may expect.

A catalogue should also stress in its description of material not alone its beauty, but also its value in any other way, such as the retention of snow for winter beauty, windbreaks, covers, bird feeding, etc. Today many nurserymen, alert because of the increased leisure of its buying public, are interested not alone in creating summer beauty, but are emphasizing the beauty of certain types of plant material for winter use about the home.

I sometimes wonder if we do not stress our sales effort over too short a period of time. We have been in the habit of securing the greatest share of our sales during the dormant season. I often have felt that the nurserymen of this country could greatly increase their selling effort by extending the planting season of material and by making a sales effort to the public when the material is blooming.

You who are near the great public gardens, arboreta and various large specialty gardens should watch for the blooming season of the newer varieties and suggest to the public in your advertising that it visit these places. From time to time your advertisements should direct your near-by public to your sales grounds to see new introductions at a time when they are at their best. In making such an effort, I feel you will be greatly rewarded by the visitors returning to your nurseries and placing orders for this material for later planting. In visits of this kind the public learns to appreciate the finer plant material that our American horticulture has to offer.

Radio Advertising.

Radio advertising for nurserymen is a comparatively new field, and it has not been undertaken by many because its cost over the better stations has usually been prohibitive. Then, again, the American public has been accustomed to securing so much entertainment in connection with the advertising effort over the radio that the average nurserymen cannot afford an interesting program. Radio publicity has its value, and the better stations in a local neighborhood can possibly be used for flash advertising as a

name reminder. Do not be attracted by low prices on poorly located stations that do not have a listener interest for effective sales promotion; it is too expensive and not enough is generally known about radio as to its value for nursery advertising.

Newspaper Advertising.

In choosing newspapers for your publicity, keep your eye on the ball and remember the limitations of any great cross section of the population as a yardstick of measurement. Remember that the circulation figures of a large city circulation do not tell the whole story, because a great many readers are apartment-house dwellers and many thousands live on substandard incomes and do not have an interest in your message. Many newspapers do not attract the type of people that you wish to reach. While the circulation of any newspaper is extremely valuable to a food manufacturer because everyone must eat, it does not have the same value for a horticultural advertiser. In those newspapers in this country that have done a splendid job in creating a good garden page there is advertising value, but many of our newspapers have been in the habit of carrying only the cheaper types of horticultural material and so they do not attract the attention of those who are interested in the finer varieties of what a nurseryman has to offer. Newspaper advertising is usually reflective of quick returns, but your advertisement does not have the duration of life that you can expect from magazine advertising. The newspapers are quickly read, but rarely retained on file by the reading public.

Magazine Advertising.

There are a number of magazines in this country which are doing a splendid work in keeping their readers interested in horticultural material through timely, informative articles on the care and culture of material. People who are genuinely interested in horticulture usually read some kind of garden magazine, and they usually retain these magazines because of the informative articles.

An advertisement placed in these magazines usually is productive of fair returns, and the sales publicity generally has a longer life than in almost any other medium, because it is read by interested people in their leisure time.

It is surprising how many keen nurserymen will exercise the greatest care and judgment in the purchase of material for the conduct of their business, but forget to use the same care and judgment when they commence an advertising program. Sales effort and proper publicity are two of the most valuable tools they use in their business. You should use the same care and skill in the use of these tools that you do in any other phase of your work. Many who prepare their own copy do not use enough care in writing it to make it effective. They usually lose sight of the fact that the advertisement should attract interest. If you secure the reader's interest, it usually results in action, and the action is converted into sales. Do not prepare your copy at the peak of your busy season. Describe your material without exaggeration and, wherever it is possible, always price it. Many times the advertiser expects the reader to overcome the great inertia of writing to ascertain the price. Sooner or later you will have to talk about price with an interested person; so why not complete

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your message with the vital information that the prospect is interested in?

Use cuts whenever possible to secure the reader's attention and to recall to his mind what the material is. Remember whenever you are purchasing space in any kind of medium, it does not guarantee the success of your advertisement. All the various media do for you is to make it possible for you to reach interested people, and you must use the kind of copy that will convert this interest into sales.

One of the greatest faults of the horticultural industry is that it lacks advertising consistency, and if you wish to reach the consciousness of the readers it is necessary to be consistent in order for your advertising to be most profitable. It is somewhat like driving a nail in with a hammer; one blow rarely drives the nail home, but successive blows establish the contact you wish to make.

If an advertising agency is planning your layout, advise with it frequently, because horticultural knowledge is a specialized knowledge. If you wish your agency to bring out the high lights of the material you wish to publicize, you should familiarize the copy writer with all the different angles of value of what you have to offer. Your knowledge is immensely helpful in assisting your agent to create good advertisements. The best kind of advertising copy is the comments by a nurseryman in the field when he is describing to a friend the best features of the plants. Why? Because the descriptions are usually given in a clear and simple way. Keep in mind in all phases of your advertising that you wish to reach interested people and people who can afford to buy what they are interested in.

Flower Shows.

Is exhibiting in flower shows profitable to the nursery business? I have no tangible figures to give you, although I do have information from many nurserymen who have participated in such exhibitions and they have been able to trace profitable returns from their exhibits. As flower exhibitions today are the display windows of horticulture, and the big spring shows come at a time when people are flower-hungry, I know of no other medium in which a nurseryman can physically exhibit his skill, culture and arrangement of plant material at little expense in a short space of time to such great groups of garden-minded people. Stand around at any of these shows and see the thousands of people with memorandum books taking down the names of nurserymen and the names of various plants. Surely this interest is reflected in sales. Flower shows are a tremendous factor in assisting interest in your industry. The organizations which are made up of amateur and commercial co-workers of yours are doing a splendid work throughout the country as an educational influence on the great throngs of people who annually attend these shows. The management of these shows deservedly warrants your cooperation and support for the interest they are creating in horticulture.

As the public is now climbing out of a great morass of indecision and doubt, as is reflected by the better business this past spring, why not let us progress from a passive state of wait and see to a determination of making a real sales and publicity effort to make the American public conscious of this industry?

Leaf Bud Cuttings

H. B. Tukey Describes Method of Propagating Raspberries, Citing Results from Recent Tests

Propagation by leaf bud cuttings involves nothing new. The fundamental principles have been known to experts in plant propagation from time immemorial, and resort is taken to the method from time to time with various materials. Yet because it may not be as familiar to everyone as it might, it is worth recalling and discussing in these pages at this time of year.

Furthermore, the writer happened recently to have the problem given him how to propagate most rapidly a new variety of black raspberry, only one plant of which was available. The question came just in time to fit in well with the method of propagation by leaf bud cuttings, and the process is being used with great satisfaction by the inquirer.

Stoutemyer, Maney and Pickett, of the Iowa agricultural experiment station, Ames, Ia., recently reported upon the suitability of this method for rapid propagation of raspberries and blackberries and deserve full credit. The method consists of making cuttings of a leaf, together with the bud in the axil of the leaf and a small attached shield of bark and wood from the cane. The cutting is not unlike a shield bud used in budding, but with the entire leaf attached as shown in figure 1. When cut the middle of July to the middle of August and placed in rooting mediums of sand or sand and peat, these so-called leaf bud cuttings rooted well, often 100 per cent, and made strong plants by the end of the growing season.

Applications of Method.

When this report was made, it was suggestive of several possibilities. The process might be useful in the rapid propagation of new varieties where wood is scarce, as already mentioned. It might be successful in propagating raspberry varieties that normally do not root well from either suckers or from tips, as in the case of certain crosses between the red raspberry and the black raspberry, which give purple raspberries, that often may not root well from tips, as do the parent black raspberries, nor from suckers, as do the parent red raspberries, and therefore may be of no commercial value. Again, it might be used as an emergency or supplementary measure with other plant materials or after failure of hardwood cuttings, root cuttings or similar means where the stand can be observed by midsummer.

Accordingly, during the season of 1934, trials were made of this method under New York conditions, having in mind the possibilities suggested in the previous paragraph. Three varieties were used; namely, a seedling red raspberry, a seedling black raspberry and a purple raspberry. Six plants of each variety were brought from storage in the nursery cellar and planted in 6-inch pots in the greenhouse the last part of February.

By the first week in April, vigorous lateral shoots had developed, and from these, leaf bud cuttings were made

April 12. The cuttings were placed in peat moss and sand in closed frames, maintained at about 70 degrees Fahrenheit, with bottom heat. Cuttings were taken on two subsequent dates—May 22 and July 2.

Results.

Leaf bud cuttings of the black raspberry made April 12 rooted ninety-three per cent within eight days and were potted May 15. The purple raspberry behaved similarly, rooting ninety-two per cent within eight days and being



Figure 1. Leaf Bud Cutting.

potted May 15. On the other hand, no plants rooted from 243 cuttings of red raspberry. The cuttings callused in ten to fifteen days after being set, and the leaves remained green and fresh for thirty days. Later the leaves yellowed and died, while the part of the cutting in the peat decayed.

Since the leaf bud cuttings were made from lateral shoot growth of 1-year-old canes, it is not surprising that the buds that developed were all fruit buds, since this is normally the fruiting wood. That is, although the cuttings of black and purple raspberry rooted, yet the buds developed into flowers, with no shoot growth. Likewise, the red raspberry cuttings developed flowers, although they failed to root.

Since the cuttings from lateral wood developed flowers instead of new shoot growth, the second lot of cuttings, May 22, was taken from the current season's suckers growing from the base of the plants. The black raspberry cut-

tings rooted eighty-six per cent by June 26, thirty-four days after striking, while the purple raspberry cuttings rooted eighty-seven per cent. Eliminating the cuttings taken from the tips of the shoots, which were immature and failed to root, rooting was 100 per cent. Furthermore, the buds developed into vigorous new shoots as contrasted with the flowers which developed from the buds of leaf cuttings from lateral growth of 1-year-old wood. The red raspberry cuttings again failed to root. They callused well and the buds made short shoot growth thirty-four days after striking, but the cuttings subsequently yellowed and died.

July 2, a third lot of leaf bud cuttings was made from the current season's suckers growing from the base of the plants, using only black and purple raspberries. Within ten to fifteen days, 100 per cent of the cuttings rooted, and by August 1, thirty days after striking, the plants were as shown in figure 2 on this page.

Discussion.

The success of this method with certain materials makes it useful for rapid propagation of new varieties where wood is scarce. It seems practicable also for emergency measures, whereby a failure with dormant wood propagation might be partially compensated for by the rooting of leaf bud cuttings. Its use to propagate material which normally does not root readily from cuttings or by laterals, such as some red and purple raspberries, is, unfortunately, not successful.

Just why some varieties are able to root from leaf bud cuttings and why others do not is indicated by an examination of the rooting habit of the black raspberry. When a black raspberry cane bends to the ground and the tip roots, the roots develop just below the bud, at the base of each leaf petiole. Accordingly, when leaf bud cuttings are made they include the region from which roots develop. The result is a high percentage of rooting. Apparently the success of this method with certain materials is to be associated with the presence of root primordia in the cuttings.



Figure 2. Rooted Black Raspberry Plants One Month after Striking.

Shrubs and Trees Flowering in July

Woody Plants That Came into Bloom During Middle and Late July in Central Ohio Are Described by L. C. Chadwick

With the approach of the midsummer season only about a score of plants are in flower, and many of these are not effective in landscape plantings because of their extremely small flowers. A list of mid and late July (July 10-31) flowering plants might include the following: *Albizia Julibrissin rosea*, *Bignonia radicans*, *B. tagliabuana* Madame Gallen, *Callicarpa purpurea*, *Cephalanthus occidentalis*, *Hibiscus syriacus* and its varieties, *Koelreuteria paniculata*, *Maackia amurensis*, *Oxydendrum arboreum*, *Stewartia koreana*, *S. pentagyna grandiflora*, *S. Pseudo-Camellia* and *Symphoricarpos Chenaultii*. To this list might be added a few of those mentioned in the last article; notably, *Abelia*, *Hypericum*, *Sorbaria sorbifolia* and some of the *Spiraeas*. Few of these mid and late July flowering plants will finish their blooming period by the end of the month. Most of them will continue to produce attractive flowers throughout August, and some of them will even be effective until nearly mid-September. A brief discussion may well be in order for each of these plants.

Albizia Julibrissin Rosea.

Albizia Julibrissin is not a plant suitable for northern localities. Even the variety *rosea*, which is dwarfier and harder than the species, is not satisfactory for general planting north of central Kentucky. A few plants are known to exist as far north as Columbus, O. Two-year seedlings were damaged in the nursery at the Ohio State University there during the mild winter of 1934-35. These same plants, however, are making good growth this season, and it may not be amiss to assume that if good-size plants of mature growth can be obtained, they may prove satisfactory there in protected places.

Few plants possess the gracefulness of foliage and flower of the *Albizia*. It is a large shrub or small tree with spreading branches, delicate compound foliage and bright pink flowers. Where hardy, it is an excellent decorative plant. Propagation may be easily accomplished by sowing seeds in the spring; they need no previous treatment.

Bignonias.

Considerable confusion exists over the proper generic name of the trumpet creeper. Standardized Plant Names adheres to the long-accepted name of *bignonia*. Most botanical authorities now consider *campsis* as correct, while a few retain the generic name of *tecoma*. Since Standardized Plant Names is accepted by most nurserymen, I shall refer to the trumpet creeper as *bignonia*.

In general, three species occur. *Bignonia radicans* is the common trumpet creeper and is a native of this country. It has long, tubular flowers borne close together and is perfectly hardy. *B. chinensis*, the Chinese trumpet creeper, is not considered hardy north of central Kentucky and has more bell-shaped flowers well separated on the flower stems.

Bignonia tagliabuana is the name given to that group which represents

the hybrids between *B. radicans* and *B. chinensis*. The most striking representative of this group is the variety listed as Madame Gallen. In this variety is found combined the good qualities of both species. It possesses hardiness and brilliant flowers that are set well apart. This variety should come into more general use. The flowers are produced in liberal profusion for about six to eight weeks, starting about the middle of July.

The *bignonias* are all rather slow in establishing themselves, but once they are established they grow vigorously, often becoming unruly. No special soil requirements are necessary. The trumpet creepers may be used in many ways. Since they readily develop aerial rootlets, with the exception of *B. chinensis*, they may be used for climbing on tree trunks, posts and fences. They are suitable for covering arbors and down spouts. For a formal effect, they may be grown on posts and trimmed heavily each spring. They develop rapidly, forming formal specimens, and flower on the current season's wood. Propagation may be by seeds, hardwood cuttings or by top grafts, grafting the better varieties onto large plants of the common species.

Callicarpa and Cephalanthus.

Little needs to be said here in connection with the beauty berry, since the genus was discussed under *Callicarpa Giraldisiana* in the last article. *C. purpurea* differs from the other by being smaller, not exceeding five feet, with more spreading branches, which bear smaller and lighter green leaves. The fruits are lilac violet, and the plant does not seem to be quite so hardy at Columbus.

The buttonbush, *Cephalanthus occidentalis*, is not adapted for general use in landscape planting, since its foliage and stem habit are coarse. As a contrast plant in the border or, better, for massing along streams or in swampy areas, the buttonbush fills a need. The fragrant flowers are white, with pinkish stamens, and are borne in globose heads. When the plants are used in masses, the flowers are effective. Propagation can be accomplished easily by using seeds or hardwood, softwood and root cuttings.

Hibiscus Syriacus.

It is not my intention in connection with the shrubby *althaea*, *Hibiscus syriacus*, to discuss its numerous varieties. The choice of these may depend largely upon one's individual taste, since they are available in a wide variation of colors. The shrubby *althaea* is so common that it is usually referred to as the fall-flowering shrub, since its flowers are produced from late July through August and into September.

Objections can be raised to the shrubby *althaea*, in that the terminal twigs are frequently winterkilled and the fruit capsules persist, unless removed, to give a shabby appearance to the plant. Good cultural practices in landscape plantings include the removal of

the old flower clusters after the blooming period is over and pruning out of all deadwood in the spring. Also, the shrubby *althaea* is among the latest of the plants to develop leaves in the spring.

Regardless of these faults, the rose of Sharon, as it is frequently called, is useful in many landscape plantings. As an individual plant, it may be developed into a bush or a small tree. Since its habit of growth is narrow and upright, it is frequently useful where a plant with height and little spread is desired. It may be used as a narrow, free-growing hedge or trimmed to a formal type. As a hedge it flowers well and is tolerant of city conditions and shade. Propagation is easily accomplished by softwood cuttings. Hardwood cuttings may be employed if they are taken before freezing weather occurs. Seeds and layers are often used.

Summer-flowering Trees.

Since *Koelreuteria paniculata*, *Maackia amurensis*, *Oxydendrum arboreum* and the *stewartias* have been discussed in previous articles, they will be mentioned only briefly at this time. *Koelreuteria*, *oxydendrum* and the *stewartias* are certainly among our best summer and early fall flowering trees. *Maackia amurensis* is less floriferous than the others. The small whitish to greenish yellow flowers are borne in erect terminal clusters. Propagation is by seeds.

Koelreuteria paniculata, the golden-rain tree, produces large, broad, loose panicles of yellow flowers well above the foliage, and they are especially attractive against a dark green background. In cold winters the terminal twigs may be injured to some extent, but good trees have been observed as far north as Detroit, Mich.; Cleveland, O., and Geneva, N. Y. After the flowering period, the inflated fruit pods are attractive. This plant is adapted to a wide range of soils, is comparatively free from pests and may be propagated readily by seeds, root cuttings and layers.

Oxydendrum Arboreum.

Oxydendrum arboreum, the sourwood, or sorrel tree, may become a tree to sixty feet high and is of a narrow, erect habit of growth. Since it belongs to the *ericaceae* group of plants, it requires an acid soil and combines readily with *rhododendrons*, *kalmias* and *hemlocks*. Its white terminal flowers and scarlet autumn foliage are especially attractive against a hemlock background. Propagation may be by seeds handled similarly to those of other *ericaceae* plants.

The *stewartias* are certainly among the most outstanding summer-flowering trees. With their attractive habit of growth, foliage and flowers, little else could be desired. Possibly *Stewartia pentagyna grandiflora* is the most beautiful of the group. The leaves are large, bright green and long-pointed and turn bright orange to scarlet in the fall. The flowers, three to four inches in diameter, have white fringed petals and pur-

plish blue stamens. *Stewartias* should be hardy throughout the greater part of Ohio and in other localities with similar climate. Deep, rich, peaty soils are preferred. Propagation may be by softwood cuttings, layers or seeds.

Symphoricarpos Chenaultii.

Symphoricarpos Chenaultii, a hybrid between *S. microphyllus* and *S. vulgaris*, has come into extensive use since its introduction about 1912. In flower, it is later than *S. vulgaris* and is hardly conspicuous. The fruits are slightly larger than those of *S. vulgaris* and are pinkish red with white dots. The foliage is smaller, and the plants are neater throughout and usually sucker somewhat less.

This *Symphoricarpos* tolerates a wide range of soils and will do well in shade. Its habit of growth and tolerance to adverse conditions make it adaptable to bank planting, for shady spots and, if held in check by pruning, as a facing plant. Propagation may be accomplished by cuttings, suckers or seeds.

OAK FOLIAGE BURNS.

Some concern has been felt in the region about Minneapolis, Minn., regarding what appears to be the burning of foliage on several species of oaks. The cool weather and unusual rainfall this year have caused vigorous growth on plant material of all kinds, but especially on shrubs and trees. It has been several years since there has been so much growth; some oak tree shoots have three feet of new growth. The leaves are correspondingly large, in many cases, and because of the soft nature of the leaves, burning has developed. As one landscape architect expressed it, the appearance of the leaves is what one would expect after a fire had swept through the branches. Two or three extremely hot days were responsible for the trouble. L. S.

DESIRABLE UNCOMMON PLANTS.

Several plants of interest to perennial growers were seen at the army gardens at Minneapolis, Minn., on a recent inspection visit by the writer. While the plants are not new, the wonderful showing of blooms they provide is outstanding this season and the subjects deserve to be more widely grown.

One of the best plants noted for the border or rock garden was *Sisyrinchium bermudianum*; the plant grows about twelve to fifteen inches high, with a mass of bluish flowers, and is a gem in every way. *Digitalis grandiflora* is far from new, but does not appear to be so commonly planted as it deserves. The plants in the army gardens are not too tall to stand erect without support of any kind, which is an advantage.

A low plant suitable for the rock garden is *Pulmonaria saccharata*. The flowers do not appear to have any great value, but the white-spotted leaves are distinctive.

Another good free-flowering plant, growing about twenty inches high, is *Oenothera Pilgrimii*; this is one of the freest-blooming of all the *œnotheras*. Several groups of *Verbena canadensis*, *Dianthus cæsius* and *Veronica repens* were also in full bloom and made a remarkable showing. L. S.

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SHELTERBELT PLANTINGS.

Reports on the plains shelterbelt project received by Paul H. Roberts, acting director, at Lincoln, Neb., from state directors say 125 miles of shelterbelt plantings have been completed in the six states traversed by the zone. An additional 5,117 acres of special tree plantings on 1,926 farms have been completed. This latter planting was made in cooperation with farmers.

On the 649 acres of land now under lease for nursery purposes, seeding is being rapidly completed, and a number of the species are up. Barring extreme weather conditions or unforeseen insect infestations, it is expected about 75,000,000 seedlings will be produced.

North Dakota, with thirty-six miles of strip plantings, has the largest mileage. South Dakota, with twenty-eight, and Kansas, with twenty-four, are close contenders. The mileage planted this year was largely restricted by the quantity of suitable nursery stock.

The wide climatic conditions encountered throughout the shelterbelt zone make it necessary to grow a variety of trees to meet this range of conditions. Each state must plant to meet its own particular needs.

Due to the wide adaptability of several species used, such as the green ash,

American elm, Chinese elm, bur and post oaks, cottonwoods, hackberry, willows, red cedar and ponderosa pine, these may be planted throughout the entire area. With a wider variety of trees made available through planned nursery production in the future, it will be possible to meet more nearly the conditions of each particular locality in the composition of the tree strip plantings.

TREES DISTRIBUTED IN SOUTH.

Farmers in the south planted more than 3,000,000 young trees last spring from nurseries maintained by state forestry authorities in cooperation with the federal government under the Clarke-McNary law. According to Joseph C. Kircher, regional forester at Atlanta, nearly 9,000,000 seedlings were propagated. Those not distributed to farmers were planted on state and private land outside of farms, allotted to schools for demonstration plots or used for erosion-control projects.

Tree-planting stock was distributed to farmers as follows: Georgia, 766,953; Tennessee, 446,800; Mississippi, 36,150; Louisiana, 97,800; Alabama, 60,112; Florida, 975,700; North Carolina, 59,100; Oklahoma, 282,900; South Carolina, 416,590.

Herbaceous Perennials

C. W. Wood Comments on Less Common Varieties of Hardy Plants Deserving Attention

As we in America advance in our knowledge of the gardening arts, we find many plants which we considered too difficult in our earlier stages to be friendly to our advances. We are, consequently, growing and enjoying much material now which was formerly considered impossible. We still have far to go, and many plants that do well in more congenial climates will always be beyond us, but we are on our way to better things. It is the purpose of these notes to point out a few of the elect which growers of the out-of-the-ordinary will find useful in their work.

Androsaces.

Had it not been for the false danger signals erected by well meaning folks, we should long ago have had androsaces aplenty in our gardens. Because there was trouble with the almost impossible arietias, it was said that we could grow none of them. There is much good material here that is no harder to manage than many a plant of inferior merit which now occupies our time. Most of the available Asiatic species, such as *A. lanuginosa* and its variety *oculata* (the latter, I believe, appears in some American catalogues as *A. Leichtlinii*), *A. primuloides*, *A. sarmentosa* and its varieties *Chumbyi* and *Watkinsii*, and the European species *A. carnea* and its varieties *Halleri* and *brigitianae*, and *A. villosa* together with its variety *arachnoidea*, are not a bit more difficult than some campanulas, lilies, phloxes, primulas, etc., that we worry over. A plant known to the trade as *A. Laggeri*, but which botanists say is a form of *A. carnea*, is spoken of as being of equally easy culture, a fact that has not been borne out in the trials in my garden. With the exception of the latter, all of the ones mentioned are easy to grow in a lath-shaded frame. In the garden they do well on a north slope where they are shaded from the sun during the hottest part of the day. The soil should be deep and well drained, preferably with plenty of stone chips, lime in the case of *villosa* and granite (acid) for *carnea* and its variety *Halleri*. They are readily increased from cuttings. The stoloniferous kinds may be multiplied rapidly by division, and all may be grown from seeds, which are often slow to germinate. Pots of seeds kept in an icebox for about sixty days and brought into the greenhouse in July sometimes give rapid germination.

Gentians.

Gentians are a different matter, the easy ones being for the most part worthless, and there is no way to account for the beauties of the race. Farrer's conclusion that "there is always hope and never any hard rule, but only good fortune assisting experience" sums up the gentian situation in an apt way. These observations apply particularly to *G. acaulis* and *G. verna*, the two species that have had the most attention from gardeners. For our purpose here, we may restrict ourselves to a few Asiatic species, one hybrid from that region, and one or two native species. Probably the easiest of the desirable sorts are the

Asiatic *G. septemfida* and its large number of offspring, including *Lagodechiana* and *Freyniana*. These are easily grown in a soil that is well filled with leaf mold and peat and, in the eastern United States, in part shade, producing flowers during July and August here. In *septemfida* the color is a soft blue, usually described as sapphire; in *Lagodechiana* it varies somewhat in seedlings, and in *Freyniana* it is a bright shade of blue paling in the throat to a lighter shade.

Just a little more difficult, but not hard enough to keep them out of gardens, are *G. Farreri* and *G. sino-ornata*. Much that has been said about the soil affinities of these two species, I am led to believe from experiments here, is quite beside the point. It has been said that the latter requires a definitely acid soil, while the other needs a limy medium. Just the opposite view is maintained by others. I shall not be disappointed in the final analysis to find that the soil texture, particularly its moisture-holding quality, is of more importance than its chemical make-up. Soil containing leaf mold and stone chips in a lightly shaded situation should do the trick in both cases if experiences here hold good in other sections. Both varieties are of semiprostrate habit, with grassy foliage and flowers of sky-blue in *Farreri* and ultramarine in *sino-ornata*, making an entrancing picture from July onward. For the nurseryman who grows his gentians in pots for sale while they are in bloom, *G. Farreri* is a gift from heaven, blooming profusely even in small sizes.

Of the American gentians which are generally available to cultivators, *G. calycosa* is probably the most beautiful as well as the most difficult. In fact, it is a little too difficult to give to the casual gardener in the trying climate of eastern United States. We have, however, an eastern native, *G. Porphyrio*, of such surpassing beauty and ease of culture that it is hard to understand how it has escaped the attention of gardeners so long. Even writers of our horticultural literature, who usually pounce upon such a subject with glee, have most of them ignored the plant, and in a few instances where it has been mentioned the misinformation has been detrimental rather than helpful. My own experience with this gentian has not been extensive enough for me to be dogmatic about it, but I think it is safe to say that its culture is not nearly so difficult as some would have us believe. It may require an acid soil and is probably best in such a medium, though I am not convinced that acidity is its positive need. That it will grow without the constant moisture mentioned by some is well attested by the fact that it grows naturally on pine barrens, both moist and dry, and Mrs. G. Latta Clement, Asheville, N. C., tells me it grows there in hard-baked loam when once established. It is my own opinion that best results will come from planting it in a moist, acid sand in full sun, but no one need stop if such a situation is not available, for it will undoubtedly adjust itself to a wide variety of situations if some

care is taken to get the plant well established.

So much space has been taken in these preliminary remarks because I think the plant is worthy of it. My inadequate vocabulary can scarcely do justice to its beauty when a single specimen is displaying twenty or more azure blue flowers. It grows from a long, yellow root, sending up foot-high, slender stems clothed with grass-like foliage, each stem terminating in a solitary flower as much as two inches across. Propagation is from seeds, which are slow to germinate unless sown as soon as ripe and even then are uncertain. Fortunately, however, it is one of the gentians that are easy to divide.

Primulas.

It is not easy in the short space available to do justice to the numerous good primulas at our command, for the 300 or more species now known to botanists contain much good material practically unknown to American gardeners. Some of them are not too difficult for the average gardener. Most of the section to which *Primula cortusoides* has given its name, including the species as well as *P. hapala*, *P. heucherifolia*, *P. lichiangensis* and *P. Sieboldii*, are of the latter class and are too well known to need comment. We have, also, a long list of easily grown hybrids, known collectively as *P. variabilis*, to which various species of the *venalis* section have contributed a part. Our attention will, however, be given to a few rare species whose ease of culture tells us that they should be made more generally available to American gardeners.

Rare in nature, where it is said to be found sparingly on the Idrian Alps, and

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rare in gardens is *P. carniolica*, a little
6-inch charmer with shining, glabrous
leaves and large umbels of soft rose
flowers with white, mealy eyes. It be-
longs to the *Auricula* section, needing
the same growing conditions as the lat-
ter, which includes a fairly rich soil in
as cool a situation as possible. I sus-
pect, however, that the species varies
somewhat in color, for it is spoken of
in some quarters as bearing rich crim-
son purple flowers. The section to which
it belongs has a number of easy sub-
jects, including, in addition to the one
named, *Clusiana*, *glaucescens*, *integri-
folia*, *intermedia* (said to be a natural
hybrid of *P. Clusiana* and *P. minima*)
and *Wulfeniana*. All of these, and
probably others of the section of which
I have no knowledge, could easily be
made a part of American gardens,
much to the benefit of the gardens as
well as the growers who supply the
plants. C. W. W.

PRIZES FOR PASADENA CONTEST.

A great many members of the trade
donated stock or other merchandise for
prizes for the recent yard and garden
contest held at Altadena, a part of
Pasadena, Cal. Among the donors
were: Armstrong Nurseries, Ontario;
McAfee Gardens and Wolf's Nursery,
San Gabriel; Howard & Smith, Monte-
bello, and Deigard Nursery, Monrovia.

The following, all of Pasadena or Alta-
dena, also donated prizes: Coolidge Rare
Plant Gardens, Grieve & Jonker, Hal
Simpson, Goode's Seed Store, Campbell
Seed Store, Crown City Nursery, R. H.
Paddycoed, Blattman's Nursery, Fraser
& Son, Ltd.; Milliken iris gardens, Tar-
bill's Flower & Garden Shop, Morgan's
Fernery, Soldena Gardens, Fuji Nursery
and Albert W. Blake.

GYPSY MOTH CONTROL.

With a blanket work-relief allotment
of \$2,800,000 recently approved by
President Roosevelt, the United States
Department of Agriculture will carry
on an expanded control and eradication
campaign against the destructive gypsy
moth in nine middle Atlantic and New
England states.

Those states in which the work will
be carried on by the bureau of plant
quarantine and the amounts to be ex-
pended in each are: Connecticut, \$496,-
664.60; Massachusetts, \$526,526.60; Ver-
mont, \$496,694.60; Rhode Island, \$47,-
774.20; New Hampshire, \$97,544.20;
Maine, \$97,544.20; Pennsylvania, \$792,-
288.40; New York, \$172,299, and New
Jersey, \$72,664.20.

The gypsy moth, a pest harmful to
shade, forest, ornamental and fruit
trees, is distributed in the New Eng-
land and middle Atlantic states. In
an attempt to curb the spread of this
tree disease to other states, the Depart-
ment of Agriculture has quarantined
the infested areas, by creating a barrier
zone some twenty to thirty miles wide,
from Long Island, along the eastern
New York state line to the Canadian
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line, transplanted, up to 4
inches.
10,000 **MAPLE**, Norway, transplanted,
up to 2 1/2 inches.
3,000 **ARBOR-VITÆ**, Pyramidalis, up
to 8 feet.
400 **FINE**, Mugho, from 2 to 4 feet.
1,000 **SPRUCE**, Norway, sheared, none
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600 **JUNIPER**, Pfitzer's, 5 to 8 feet
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OUTLAWS INSECT PESTS.

A village ordinance outlawing insect pests in southeastern New York is an unusual development of the tent caterpillar outbreak. Here is one:

It shall be unlawful for any owner of any occupied or unoccupied lot or land or any part thereof . . . to permit or maintain on any such lot or land, any trees, shrubs or bushes or parts thereof which are or may become infected or infested with caterpillars, tent caterpillars, insects, worms, maggots, parasites, larvae or grubs of lepidopterous insects or other creeping segmented animals, which cause or tend to cause disease, destruction or damage to such trees, shrubs or bushes by devouring the bark or foliage thereof, and which spread by passing from such trees, shrubs or bushes, to other trees, shrubs or bushes, thereby causing destruction and damage to the property of others and becoming an unsightly and public nuisance.

Those not complying with the ordinance are declared guilty of disorderly conduct and, upon conviction, are liable to a penalty not exceeding \$100 for each offense, each day upon which such violation continues constituting a separate offense. This act is both comprehensive and drastic.

There is no question as to the desirability of controlling insect pests. The enactment was drafted primarily to enforce control of the apple tent caterpillar. Strictly construed, it applies to any insects feeding upon trees or shrubs, and spreading to other trees and shrubs and causing damage, something characteristic of many insects. It is too inclusive. It includes the elm leaf beetle, the elm bark beetles, the elm borers, the leopard moth, the case-bearers upon apple, elm, birch and other trees, the Japanese beetle, the gypsy moth and many others. The list could be greatly extended. There is also the question as to what constitutes "destruction or damage." There may be radical and well founded differences of opinion in regard to this.

FREIGHT CHARGE IN TRUCK HAUL.

In the future nurserymen of Texas who make their deliveries by trucks to customers at a distance will be obliged to make charges for freight. The attorney-general of Texas recently ruled this, according to W. C. Griffing, Beaumont, a member of the transportation committee of the Southwestern Association of Nurserymen. The ruling is as follows:

"The attorney-general of Texas has ruled that shippers who use the highways to deliver their own freight in their own trucks to their customers and collect from these customers a transportation charge in addition to the f.o.b. origin price are hauling freight for hire and must obtain from the railroad commission of Texas a permit to operate as a contract carrier. The attorney-general has also ruled that such a shipper is a contract carrier (and must have a permit before he can operate) if he makes a delivered price which includes any transportation cost whatsoever, whether shown on the invoice as a transportation charge or as a service charge or by any other name, or even if it is included in the price of

each separate entry on the invoice. In other words, the attorney-general holds that the shipper may not evade the provisions of the motor-carrier law by making a delivered price at destination when such price is, in fact, the origin price plus the freight rate." P. M.

RED YORKING APPLE PATENTED.

The Red Yorking apple is being given close attention by growers in the York Imperial apple-producing sections. Red Yorking is a bud sport, being a mutation of the famous York Imperial.

The new variety is similar to its parent in size and shape, but its chief distinction is that it has much better color, Red Yorking being almost 100 per cent bright red color. Red Yorking takes on high red color from two to three weeks earlier in the fall than the York Imperial, which is a distinct advantage in selling, as the earliness in season and the high red color command much higher prices. Red Yorking is also said to be a more vigorous grower and a heavier producer than York Imperial, which it seems likely to supplant.

Harrisons' Nurseries, Inc., Berlin, Md., Buntings' Nurseries, Inc., Selbyville, Del.; Waynesboro Nurseries, Inc., Waynesboro, Va., and Edgar W. Hartman, Cashtown, Pa., were granted plant patent No. 125 on Red Yorking May 28, 1935. This patent gives the owners the exclusive right to propagate, advertise and sell Red Yorking apple trees throughout the United States and the territories thereof for a period of seventeen years.

OBITUARY

John B. Fleming.

John B. Fleming, president of the Mountain View Nursery Co., Williamsport, Md., died recently, aged 68 years.

Mr. Fleming, who was active in Republican politics in western Maryland for many years, was formerly mayor of Williamsport, county tax collector and a member of the Republican county central committee.

He is survived by his widow; a son, John A., Washington, D. C.; a daughter, Mary K., at home, and a brother, J. Walter, Washington. Funeral services were held July 16.

Christ Nieman.

A retired nurseryman, Christ Nieman, died July 10, at his home at Port Clinton, O. He was 77 years old and had been in ill health for five years, though able to be about. He collapsed while in his yard and a little later a nephew, Amos Westphal, who lived with him, found the body.

Besides the nephew, Mr. Nieman is survived by three brothers, Henry, Elmore, O., and William and August, living in Oregon state. Funeral services were held from the Gerner & Wolf funeral home July 12, with burial in Riverview cemetery.

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Nursery Tools, Leonard Full-strapped Spades, Kunde Knives and Shears, Budding and Grafting Supplies. Free 80-page wholesale catalogue illustrates 600 tools.

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CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in *The American Nurseryman*.]

A. B. Pontius, Harbor Springs, Mich.—Descriptive price list of choice bulbs and hardy perennials. Included are gladioli, *Milla biflora*, *Amaryllis formosissima*, dahlias, irises and peonies.

Miller's Garden, Grandview, Wash.—Mrs. J. J. Miller's offers of irises, peonies and regal lilies, presented in a pleasing booklet form with color plates and black and white half tones for illustrations.

Manshu Nosen Shokai, Inc., Dairen, Manchuria—Contract price list for 1935 crops of forest and nursery seeds, including numerous oriental novelties, also a few hardy perennial seeds and lily bulbs.

Tip-Top Gardens, Snyder, N. Y.—Jacob Storer's offers of ten of his own iris introductions. These are said to be the best of many years' selection. Mr. Storer, who has been a member of the American Iris Society continuously since 1921, also grows a large selection of standard varieties and maintains a display garden at Buffalo, N. Y.

C. F. Wassenberg, Van Wert, O.—Retail catalogue of modern peonies and irises. A large, alphabetically arranged general list of irises is supported by two smaller groups priced at 10 and 15 cents. The extensive general peony list includes single and Japanese-type varieties and is headed by five new seedling peonies originated by B. H. Wright and introduced by Mr. Wassenberg this year.

Henry A. Dreer, Philadelphia.—Annual retail catalogue, consisting of 198 pages and a cover. This is the firm's usual complete "Garden Book," describing and illustrating up-to-date selections in flower and vegetable seeds, perennial plants, nursery stock, conservatory plants, roses, bulbs and accessories. Also retail summer list of seeds, plants and bulbs and summer specialty list of seeds, plants and flowering bulbs for florists.

Harmel Peony Co., Berlin, Md.—The firm's twenty-fourth annual wholesale offering of "peony aristocrats." A note states that this list represents well grown, selected varieties grown on the firm's own 80-acre farm maintained solely for the production of fine peonies on a large scale. The general list is arranged alphabetically, with the early varieties marked. Along with suggestions for florists to grow peonies for cut flowers is a list of the best varieties for the purpose.

Schreiner's Iris Gardens, St. Paul, Minn.—The eighth edition of "An Iris Lover's Catalogue," providing a comprehensive picture of the iris situation of today. The list includes about 400 of the finer varieties, with a selection of the 100 best. An innovation in this year's catalogue is a revised system of color classification, with a new color diagram showing the changed color designations now in use. There is a review of the latest in iris creations that is interesting. Interesting, also, are a large selection of hemerocallis and a selected strain of delphinium designated as Lyndell hybrids.

Robert Wayman, Bayville, L. I.—A 48-page catalogue devoted almost exclusively to irises and illustrated almost entirely with color plates. The largest list, representing tall bearded irises, is a substantial selection that includes most of the acknowledged aristocrats, old and new in origin. Most of the commercial types are listed in variety, while among the novelties are species from Louisiana, the Pacific coast, Asia and Europe; beardless types, hybrids and Japanese irises, almost all shown in color. Peonies, a few hardy perennials and plants and a number of day lily varieties complete the catalogue.

Watkins & Simpson, Ltd., London, England—A 44-page catalogue of seeds of vegetables and florists' flowers, including perennials, biennials and annuals for summer and autumn sowing. Many of the leading strains of the subjects commonly grown by the trade are listed, along with a host of choice and rare items, particularly in the perennial and rock plant categories. One inserted leaflet calls attention to a special strain of double and semidouble Japanese chrysanthemums, another to choice and rare plants collected in Kashmir, India, including *Gentiana Kurroo* and choice anemones, and a third to seeds of desirable alpine plants suitable for the rockery.

Quality Gardens, Freeport, Ill.—A fitting member of the group of splendid catalogues that have been issued by Mrs. Douglas Pattison in featuring new, rare and fine irises. The color reproductions, as usual, are superb, prominent ones in this issue being portrayals of Jean Cayeux, Burning Bronze and President Pilkington. Black and white half tones also do an effective job of illustration. Mrs. Pattison lists thirteen novelties and scarce irises for 1935. She says irises of the tall bearded class were almost the only perennials that survived intact under the severe conditions of heat and drought in her section last summer. There are some interesting comments on planting irises for color effects.

J. B. McCune, Louisville Nurseries, St. Matthews, Ky., received a No. 3 Paragon sprayer from the Campbell-Hausfeld Co. at the close of the A. A. N. convention at Cincinnati. The Paragon sprayer met with a good reception from visitors to the convention.

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SPRAYER CATALOGUE.

Nurserymen and landscapers who are in need of a sprayer will find the latest catalogue, No. 9, of the Campbell-Hausfeld Co. interesting. Fine illustrations and complete descriptions of the entire line of Paragon sprayers, including types for virtually all kinds of conditions, are well presented on a high grade of gloss paper. Owners of Paragon sprayers may want to get a copy of the catalogue for its price list of repair parts. A spraying schedule for fruit trees is included in the 15-page book. A copy will be sent free to anyone interested.

CHARLES F. CARTWRIGHT, owner of the Whitegate Nursery, Pomona, Cal., died recently. He was formerly in business at Oakland, Cal.

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